

Amendments to the Claims

Please amend the claims as follows:

1.-192. (Canceled)

193. (New) A method of providing extreme pressure lubrication of drilling equipment during drilling operations, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control

properties, the drilling fluid system comprising a continuous phase comprising as an integral component a dispersion comprising a quantity of insoluble fatty acid soap particles comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof; and,

drilling through a subterranean formation using the drilling fluid system under conditions effective to maintain effective rheological properties and gel strengths and to maintain effective fluid loss control properties, and to react the insoluble fatty acid soap particles with one or more metal surfaces of drilling equipment in contact with the drilling fluid system, thereby producing lubricated drilling equipment comprising one or more metal surface comprising a substantially continuous lubricating film providing improved lubricity as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

194. (New) The method of claim 193 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength, measured in psi, compared to a control during extreme pressure testing.

195. (New) The method of claim 193 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

196. (New) The method of claim 193 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

197. (New) A method of providing extreme pressure lubrication of drilling equipment during drilling operations, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control properties, the drilling fluid system comprising a continuous phase comprising as an integral component a dispersion comprising a quantity of insoluble lithium fatty acid soap particles; and, drilling through a subterranean formation using the drilling fluid system under conditions effective to maintain effective rheological properties and gel strengths and to maintain effective fluid loss control properties, and to react the insoluble lithium fatty acid soap particles with one or more metal surfaces of drilling equipment in contact with the drilling fluid system, thereby producing lubricated drilling equipment comprising one or more metal surface comprising a substantially continuous lubricating film providing improved lubricity as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

198. (New) The method of claim 197 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength, measured in psi, compared to a control during extreme pressure testing.

199. (New) The method of claim 198 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

200. (New) The method of claim 198 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

201. (New) The method of claim 198 wherein the drilling fluid system comprises an aqueous continuous phase.

202. (New) A method of providing extreme pressure lubrication of drilling equipment during drilling operations, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control properties, the drilling fluid system comprising one or more polymers comprising one or more monomers comprising acrylamide and a continuous phase comprising as an integral component a dispersion comprising a quantity of

insoluble fatty acid soap particles comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof, drilling through a subterranean formation using the drilling fluid system under conditions effective to maintain effective rheological properties and gel strengths and to maintain effective fluid loss control properties, and to react the insoluble fatty acid soap particles with one or more metal surfaces of drilling equipment in contact with the drilling fluid system, thereby producing lubricated drilling equipment comprising one or more metal surface comprising a substantially continuous lubricating film providing improved lubricity, as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

203. (New) The method of claim 202 wherein the improved lubricity is demonstrated by an increase of 25% or more in lubricating film strength, measured in psi, compared to a control during extreme pressure testing.

204. (New) The method of claim 203 wherein the continuous phase is aqueous.

205. (New) The method of claim 203 wherein the alkali metal is lithium.

206. (New) The method of claim 204 wherein the alkali metal is lithium.

207. (New) The method of claim 203 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

208. (New) The method of claim 203 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

209. (New) The method of claim 203 wherein the polymer comprises a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

210. (New) The method of claim 203 wherein the polymer comprises a combination of acrylamide methyl propane sulfonate (AMPS) and dimethyl acryamide (DMA).

211. (New) A method of providing extreme pressure lubrication of drilling equipment during drilling operations, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control properties, the drilling fluid system comprising a continuous phase comprising a dispersion comprising a quantity of insoluble lithium stearate particles, drilling through a subterranean formation using the drilling fluid system under conditions effective to maintain effective rheological properties and gel strengths and to maintain effective fluid loss control properties, and to react the insoluble lithium stearate particles with one or more metal surfaces of drilling equipment in contact with the drilling fluid system, thereby producing lubricated drilling equipment comprising one or more metal surface comprising a substantially continuous lubricating film providing improved lubricity as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

212. (New) The method of claim 211 wherein the improved lubricity is demonstrated by an increase of 25% or more in lubricating film strength, measured in psi, compared to a control during extreme pressure testing.

213. (New) The method of claim 212 wherein the continuous phase is aqueous.

214. (New) The method of claim 212 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

215. (New) The method of claim 212 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

216. (New) The method of claim 213 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

217. (New) The method of claim 213 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

218. (New) The method of claim 212 further comprising providing the drilling fluid system with one or more polymers comprising acrylamide monomers while maintaining the effective rheological properties, gel strengths, and fluid loss control properties.

219. (New) The method of claim 218 wherein the polymer comprises a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

220. (New) The method of claim 218 wherein the polymer comprises a combination of AMPS and DMA.

221. (New) The method of claim 212 wherein the substantially continuous lubricating film reduces corrosion of the one or more metal surface.